

REMARKS

Claims 20-23 are pending in the present application.

The rejection of Claims 20-23 under 35 U.S.C. §103(a) over Ozawa et al (US 5,158,113) in view of Thomson (US 3,715,371) [improperly cited as Thomas] is traversed.

Ozawa et al disclose a hose having a multi-layered inner tube having an inner wall and an outer wall where the layers are made of select rubbers (Abstract). However, Ozawa et al fails to disclose or suggest a tube of a brass wire with an adhesive layer of chlorinated rubber and chlorosulfonated polyethylene rubber. Indeed, the only recitation by Ozawa et al of chlorosulfonated polyethylene rubber is in the discussion of the background. Ozawa et al merely list chlorosulfonated polyethylene rubber as an example of certain rubber materials that “have been proposed which are highly resistant to oils and thermally stable at ambient temperatures generally of 120° to 150°C.”

The Examiner states that the “thickness of the cured adhesive is 12.77 mm, which is outside the claimed range of 5 to 25 microns (12-22 microns).” At the outset, Applicants note that Ozawa et al do not disclose a “thickness of the cure adhesive is 12.77 mm” as the Examiner asserts. Apparently what the Examiner is referring to is the disclosure at column 7, lines 34-36, which merely states that the *dimensions of the hose* were 12.7 mm in inside diameter and 22.5 mm in outside diameter. It appears that the Examiner is comparing the diameter of the tube with the thickness of the adhesive layer, which amounts to attempting to classify an apple as an orange.

Even if the comparison by the Examiner were valid, Applicants note that 12.77 mm is more than just a bit outside the claimed thickness range of 5 to 25 microns. This difference is 3 orders of magnitude! Applicants wonder how there can be any rational basis to draw a conclusion that there would be any motivation to alter a parameter by 3 orders of magnitude,

much less an expectation of what results would flow therefrom. Moreover, the present claims are patentable under the rationale of *In re Antonie*, 195 USPQ 6, 8-9 (CCPA 1977) (**copy enclosed**) (exceptions to rule that optimization of a result-effective variable is obvious, such as where the results of optimizing the variable are unexpectedly good or where the variable was not recognized to be result effective).

MPEP §2142 states: “To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation... to modify the reference... Second, there must be a reasonable expectation of success. Finally, the prior art reference... must teach or suggest all the claim limitations.” For the reasons stated above, Ozawa et al fails to provide a any motivation for providing an adhesive layer within the claimed range and fails to provide any reasonable expectation of success. Thomson fails to compensate for this deficiency as this reference is merely cited for teaching the addition of an adhesion-promoting agent. For this reason alone, a *prima facie* case is lacking over the combined disclosures of Ozawa et al and Thomson.

Applicants further note that the Examiner asserts that protecting the hose from bulging is equivalent to shrinkage control material. However, the shrinkage control material of the present invention protects the hose from longitudinal shrinkage. It appears that the Examiner has misunderstood the present invention. In the present invention, an adhesive layer of chlorinated rubber and chlorosulfonated polyethylene rubber bonds a brass wire or a brass-plating steel wire firmly to an elastomeric extrusion of ethylene-propylene-diene ternary copolymer.

Citing *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974), MPEP §2143.03 states: “To establish a *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.” Applicants submit that the disclosures of Ozawa et al and Thomson fail to meet this requirement, and as such the artisan

would have no reasonable motivation to compile the products of the present invention or any reasonable expectation of the advantageous obtained thereby.

Applicants request withdrawal of this ground of rejection.

The rejection of Claims 20-23 under 35 U.S.C. §103(a) over Bezwada et al (US 4,300,973) in view of Thomson (US 3,715,371) [improperly cited as Thomas] is traversed.

Bezwada et al disclose a method for adhering rubber, such as a ethylene-propylene-diene terpolymer rubber, to reinforcing metal such as brass-coated steel wire. Thomson is cited for teaching the addition of an adhesion-promoting agent.

Citing *In re Royka*, MPEP §2143.03 states: “to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.” Applicants submit that this combination of disclosures fails to present even a *prima facie* case of obviousness against the pending claims.

Specifically, the combined disclosures of the applied references, even when combined, fail to disclose or suggest a heat-treated adhesive layer comprising a chlorinated rubber and a chlorosulfonated polyethylene rubber to improve adhesion of brass wire or brass-coated steel wire to ethylene-propylene-diene terpolymer rubber. This adhesive layer is described, for example, at specification page 5, lines 9-19. This material similarly is used in Examples 1-4, and shows excellent results (note Table 1 at specification page 9).

Accordingly, Applicants respectfully request withdrawal of this ground of rejection.

Applicants submit that the present application is now in condition for allowance.

Early notification of such action is earnestly solicited.

Respectfully submitted,

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